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DANIEL GRAY AND RICHARD O. BAILEY, OF ONEIDA, AND WILLIAM S. MURRAY, OF UTICA, NEW YORK, ASSIGNORS TO ONEIDA COMMUNITY, LIMITED, OF ONEIDA, NEW YORK, A CORPORATION OF NEW YORK.

ALUMINUM-PLATED ARTICLE AND PROCESS FOR PRODUCING THE SAME.

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This invention relates to aluminum plated articles and a process for producing the same; the invention having especial reference to the production of such articles by the electro-deposition of the aluminum.

In carrying out the invention a suitable solution is prepared as follows:

Sulfanilic acid (p-amido-benzene sulphonic acid) is added to boiling water until no more will dissolve and an excess is present. To this is added a quantity of freshly precipitated aluminum hydroxide, or gelatinous aluminum hydroxide. The mixture is boiled until the aluminum hydroxide is dissolved or until no more will dissolve. A fresh quantity of sulfanilic acid is added and the above process is repeated until no more of either constituent will dissolve.

In the solution, contained in a suitable receptacle, a sheet of aluminum is used as the anode together with any suitable cathode, the distance between the electrodes being approximately 2 inches. This solution is electrolyzed for sometime preliminary to actual plating use.

The current density may be approximately .15 amperes per square inch. This will vary with the temperature and may range from .1 to .5 amperes per square inch. The source of current is any suitable direct current generating apparatus with at least 125 volts capacity.

After thus preparing the aforesaid solution, aluminum may be plated upon any suitable cathode; both soluble and insoluble anodes have been used. Sheet aluminum is used when it is desired to plate out pure aluminum from this solution. When other soluble anodes are used, such as silver or copper, it is found that the silver or the copper, as the case may be, is deposited with the aluminum.

Copper and aluminum, and silver and aluminum, may be plated together. In the former case a sheet of copper is first used as the anode, and then a sheet of aluminum. In the latter case a sheet of silver is first used and then a sheet of aluminum.

What is claimed is:

1. The process of electroplating aluminum on a base of suitable material, which consists in using the base as a cathode and an anode of aluminum, in an electrolyte comprising a solution of an aluminum salt of an amido-benzene sulphonic acid, and passing a current through the electrolyte from the anode to the cathode.

2. The process of plating aluminum on a base of suitable material, which consists in using the base as a cathode and an anode of aluminum in an electrolyte comprising an aluminum salt of sulfanilic acid, and passing a current through the electrolyte from the anode to the cathode.

3. The process of plating aluminum on a base of suitable material, which consists in dissolving an amido-benzene sulphonic acid in boiling water, then adding an aluminum hydroxide to the mixture to form an electrolyte solution, using the base to be plated as a cathode with an aluminum anode, in said electrolyte, and passing a current from the anode to the cathode.

In testimony whereof, we have hereunto set our hands.

DANIEL GRAY.
RICHARD O. BAILEY.
WILLIAM S. MURRAY.